

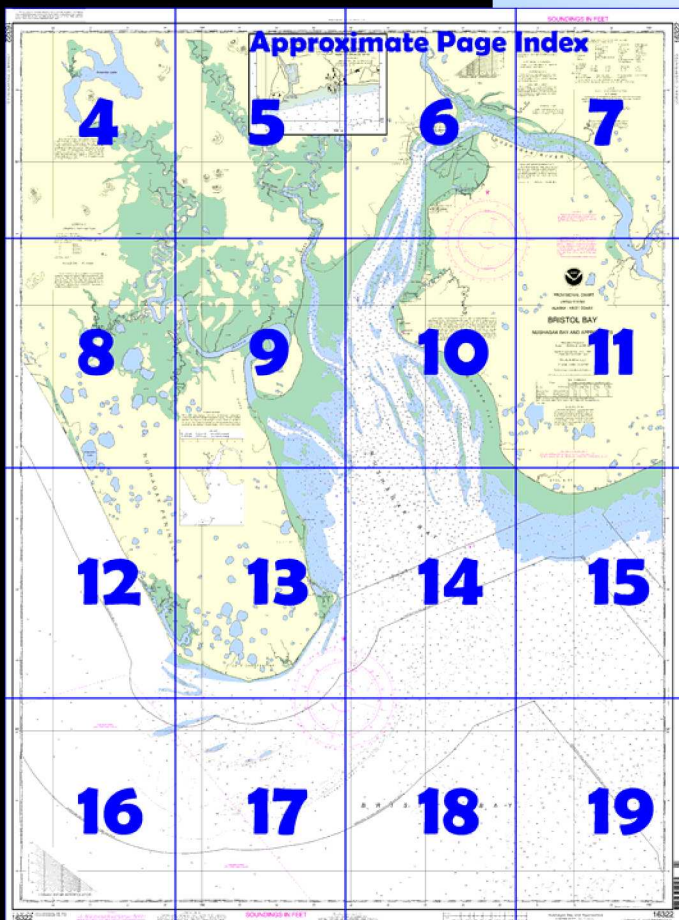
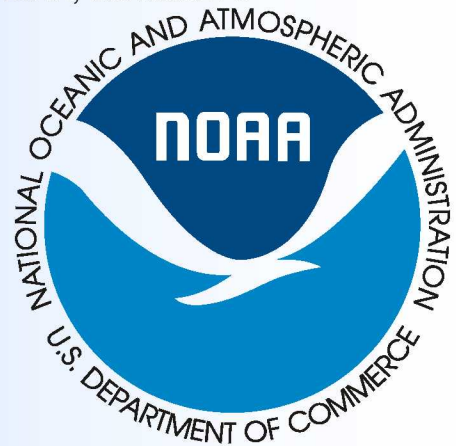
BookletChartTM

Bristol Bay - Nushagak Bay and Approaches (NOAA Chart 16322)

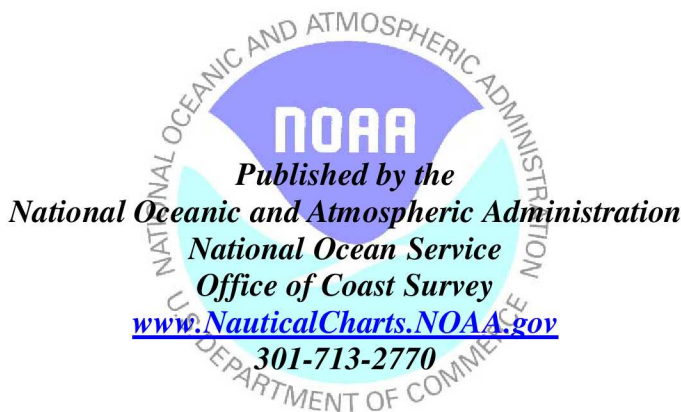


A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ✓ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ✓ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts
- ✓ Compiled by NOAA, the nation's chartmaker.



Home Edition (not for sale)



What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

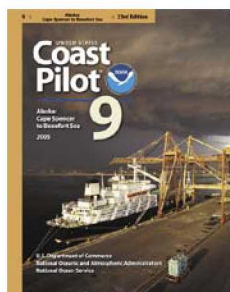
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 9, Chapter 8 excerpts]

(180) **Nushagak Bay** and **Nushagak River**, on the N side of Bristol Bay near its head, are important for the extensive salmon fishing and a number of large canneries that operate during the summer. The bay is 17.5 miles wide at the entrance between Protection Point and Etolin Point. The surveys of 1948-50 show that the bars and channels in the upper bay and river have changed considerably. Local authorities state that the area between Clarks Point and

Dillingham (Snag Point) is particularly subject to change on the ice runoff each spring.

(186) The peninsula of **Cape Constantine** is low rolling tundra country, with bluffs in places. **Nichols Hills**, 125 feet high, are small sand knolls, the highest part of a ridge that follows the E side of the cape, and is 5 miles NW of Protection Point.

(187) At the SW end and on the SE side of the cape are the entrances of

two lagoons that can be entered by boats at high water when there is no surf. At low tide, water remains in the entrance and for a short distance inside the first lagoon; the second lagoon is bare.

(188) Shoals with little water on them in places extend 6 miles S from Cape Constantine, and the outer shoal, Ustiugof Shoal, is 8 to 9 miles SE from the cape. These shoals are in the form of long ridges trending in the direction of the set of the tidal currents around the cape to and from Nushagak Bay. They are steep-to, especially on the offshore side, and soundings will not give sufficient warning to avoid them. The tidal currents NE of **Sterling Shoal**, off Cape Constantine, have a velocity of about 2 knots. (See the Tidal Current Tables for predictions.)

(189) **Ustiugof Shoal** is a narrow ridge with a least depth of 13 feet, and has a length of 15 miles in a 052° direction. Close to its SE side are depths of 11 fathoms or more. From a vessel near the shoal, Cape Constantine can be seen in clear weather. The greatest care is required when S or SE of the cape. The shoaler ridges are generally indicated by rip or breakers at low water, but there is generally nothing to indicate Ustiugof Shoal.

(190) **Protection Point**, the E end of Cape Constantine, is a low marshy spit which extends 1.5 miles from the higher land. On the N side of the point, 2 miles WNW of its end, is the entrance to a lagoon; small boats can anchor in, or close inside the entrance, but the current is strong on the ebb. The current velocity off the point is about 2 knots on the flood and 3 knots on the ebb. A narrow shoal which uncovers in places at low water extends 4.2 miles S from the point. The S half of the shoal is about a mile from shore; between the point and the N end of the shoal is a narrow channel. A detached shoal about 2 miles E from the point has a least depth of 15 feet.

(191) **Nichols Spit**, E of Nichols Hills, forms a cove, dry at low water, that can be entered by boats at high water and affords shelter except from N winds.

(192) **Igushik River**, 15 miles N of Protection Point, is a crooked winding river on the W side of the bay; vessels up to about 24-foot draft have been taken out. The channel into the river is not surveyed. The flat on the E side of the channel leading to the mouth of the river shows for nearly its full length at low water. The bar at the entrance of the channel has depths of 5 to 14 feet on it, and is about 7.5 miles SE of the mouth of the river and 8.8 miles N from Protection Point.

(193) **Igushik Ridge**, on the W side of Igushik River, is prominent, being about 260 feet high near its N end, where it breaks sharply to the river. The peninsula E of the river is low.

(194) **Snake River**, 10 miles N of the mouth of Igushik River, is used only by fishing boats. The channel leading to the mouth of Snake River has depths of about 7 to 29 feet, and is well defined at low water by the flats, which uncover, except at the entrance.

(196) **Etolin Point**, the larger rounded point between Kvichak and Nushagak Bays, is flat, tundra covered, with several shallow lakes, some of which have been used for floatplane landings. The W extremity of the point is a 90-foot-high bluff. A 149-foot-high rounded hill, 2 miles E of the point, is a prominent landmark when approaching from seaward. the channel to Ekuk. **Ekuk Bluff**, NNW of Etolin Point, is 170 feet high and prominent. **Ekuk** is a native village on a spit at the N end of the bluff. The lagoon inside the spit is bare at low water. The cannery wharf at Ekuk is 150 feet long with 7 feet alongside at high water. Gasoline, diesel oil, and fuel oil are stored for cannery use, and water is available.

(198) **Clarks Point**, 1.5 miles N of Ekuk, is low and has an extensive gravel beach. On the point are a large Alaska Packers Association cannery and the village of Clarks Point. The ridge, 169 feet high, terminates in a bluff at the shoreline 0.6 mile S of the point and is prominent from seaward. Several large water tanks near the shore end of the bluff are prominent landmarks. A wreck, awash at low water, is about 1 mile SW of the cannery.

Table of Selected Chart Notes

Corrected through NM Mar. 06/04
Corrected through LNM Feb. 17/04

HEIGHTS

Heights in feet above Mean High Water.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 9 for important supplemental information.

For Symbols and Abbreviations see Chart No. 1

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-6802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

Mercator Projection
Scale 1:100,000 at Lat 58° 36'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

AT MEAN LOWER LOW WATER

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Tuklung Mt, AK WNG-525 162.425 MHz

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 2.717" southward and 7.846" westward to agree with this chart.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, and U.S. Coast Guard.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, [United States Coast Pilot](#).

NOTE X

The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1988, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State or Federal law. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Federal fisheries jurisdiction and limit of states' jurisdiction under the Submerged Lands Act (P.L. 83-31; 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification, as represented on future charts. The lines shown on the most recent chart edition take precedence.

UPDATING SERVICE

FOR THIS CHART, a listing of NOTICE TO MARINERS (NM) corrections subsequent to the NM corrected through date shown in the lower left hand corner, is available from the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

COLREGS, 80.1705 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

| | | | |
|-------------------|--------------------------|------------------------|--------------------|
| AERO aeronautical | G green | Mo morse code | R TR radio tower |
| Al alternating | IQ interrupted quick | N nun | Rot rotating |
| B black | Is isophase | OBSC obscured | s seconds |
| Bn beacon | LT HO lighthouse | Oc occulting | SEC sector |
| C can | M nautical mile | Or orange | St M statute miles |
| DIA diaphone | m minutes | Q quick | VQ very quick |
| F fixed | MICRO TR microwave tower | R red | W white |
| Fl flashing | Mkr marker | Ra Ref radar reflector | WHIS whistle |
| | | R Bn radiobeacon | Y yellow |

Bottom characteristics:

| | | | | |
|---------------|-----------|---------|-------------|-----------|
| Blds boulders | Co coral | gy gray | Oys oysters | so soft |
| bk broken | G gravel | h hard | Rk rock | Sh shells |
| Cy clay | Grs grass | M mud | S sand | sy sticky |

Miscellaneous:

| | | | |
|--|-------------------------|----------------------|----------------|
| AUTH authorized | Obstrn obstruction | PD position doubtful | Subm submerged |
| ED existence doubtful | PA position approximate | Rep reported | |
| Wreck, rock, obstruction, or shoal swept clear to the depth indicated. | | | |
| (Z) Rocks that cover and uncover, with heights in feet above datum of soundings. | | | |

TIDAL INFORMATION

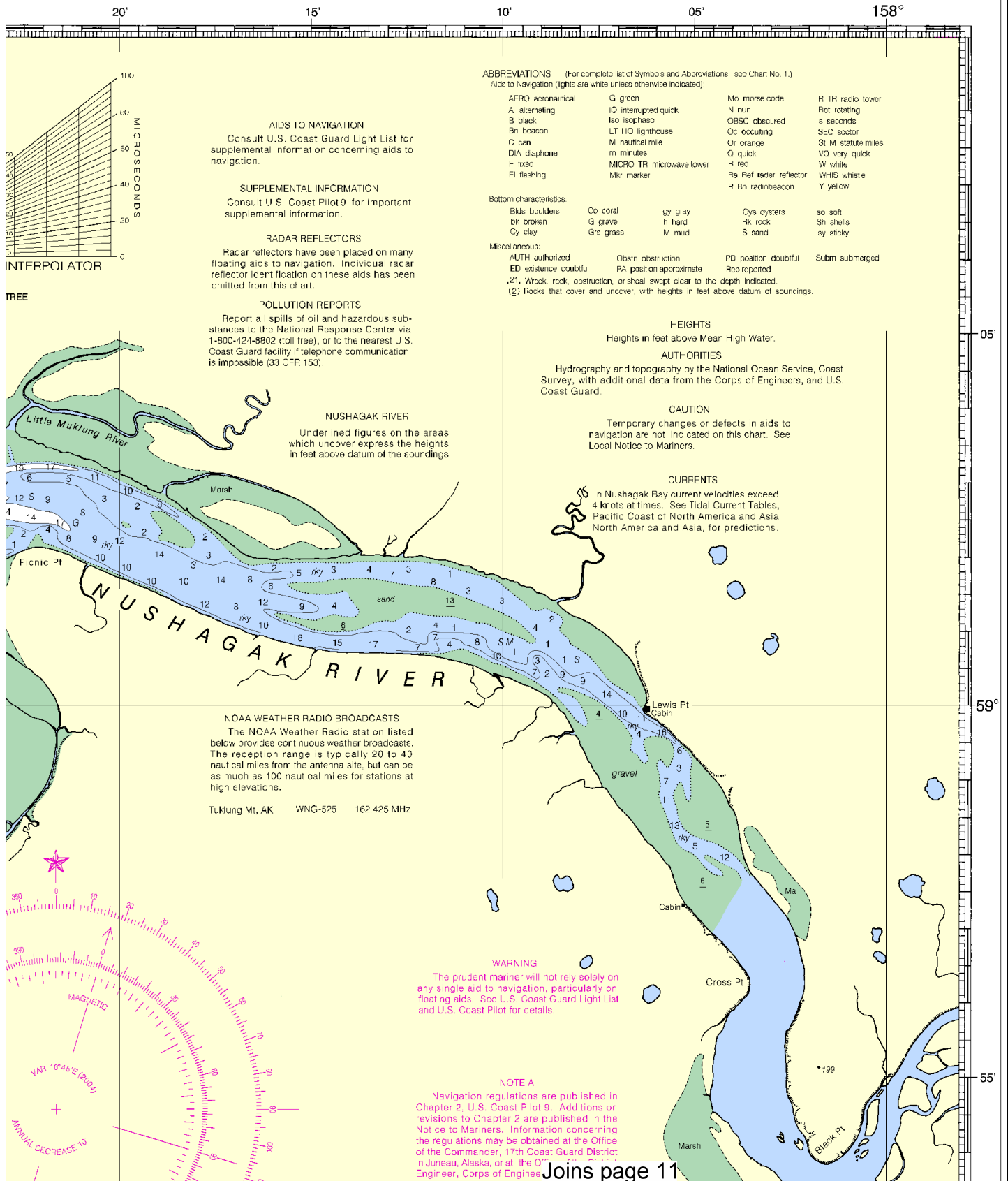
| Place Name (LAT/LONG) | Height referred to datum of soundings (MLLW) | | | |
|-------------------------------------|--|----------------------------|---------------------------|------------------------------|
| | Mean Higher High Water feet | Mean High Water feet | Mean Low Water feet | Extreme Low Water feet |
| Protection Point (58°30'N/158°42'W) | 16.9 | 15.2 | 2.5 | -5.0 |
| Snag Point (59°02'N/158°27'W) | 19.8 | 18.0 | 2.1 | -5.0 |
| Clarks Point (58°51'N/158°33'W) | 19.5 | 17.8 | 2.5 | -5.0 |

Note: Currents in Nushagak Bay current velocities exceed 4 knots at times.
See Tidal Current Tables, Pacific Coast of North America and Asia, for predictions.
(Dec 2003)

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:133333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



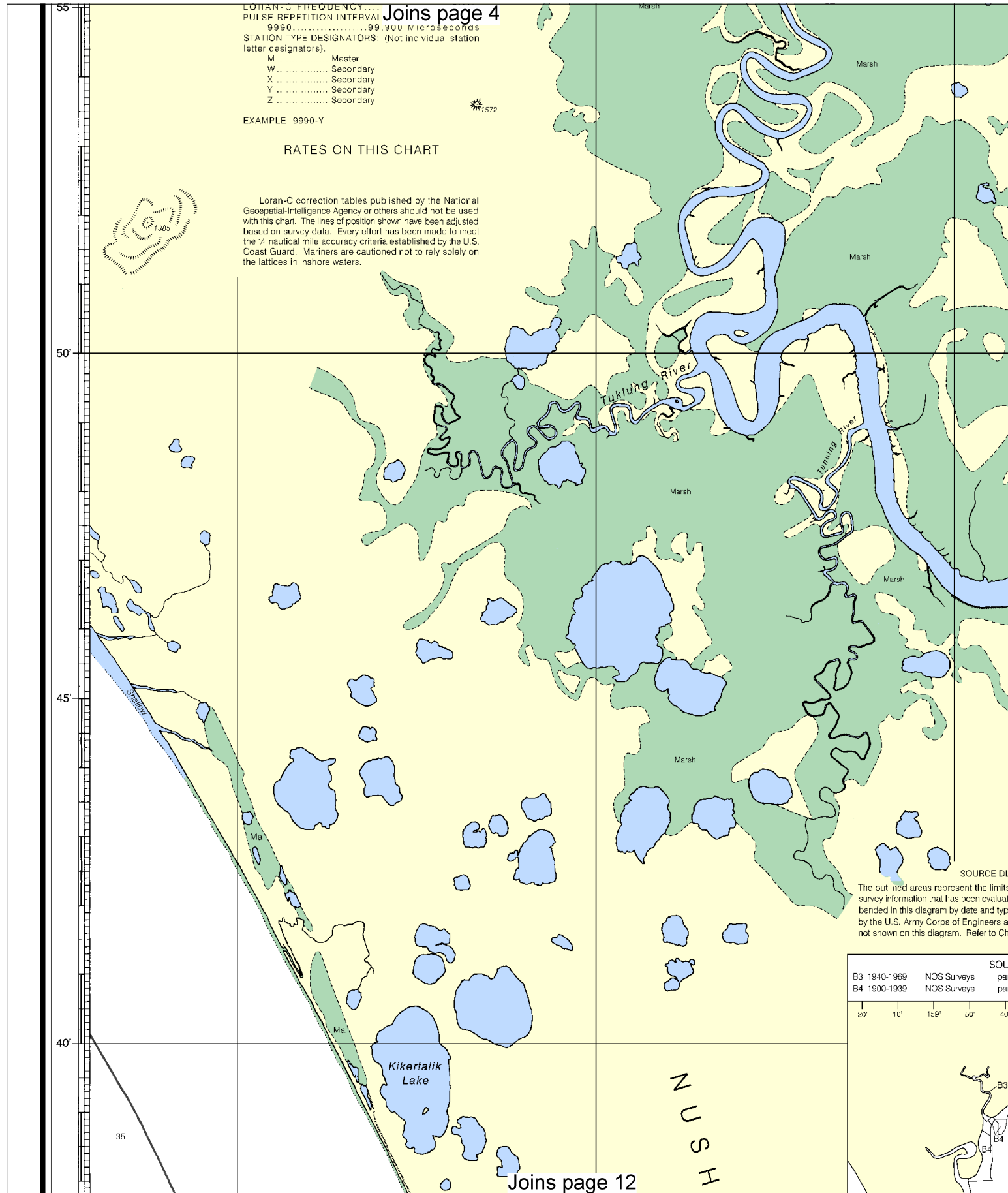
SOUNDINGS IN FEET



16322

LORAN-C OVERPRINTED

Joins page 11



Joins page 5

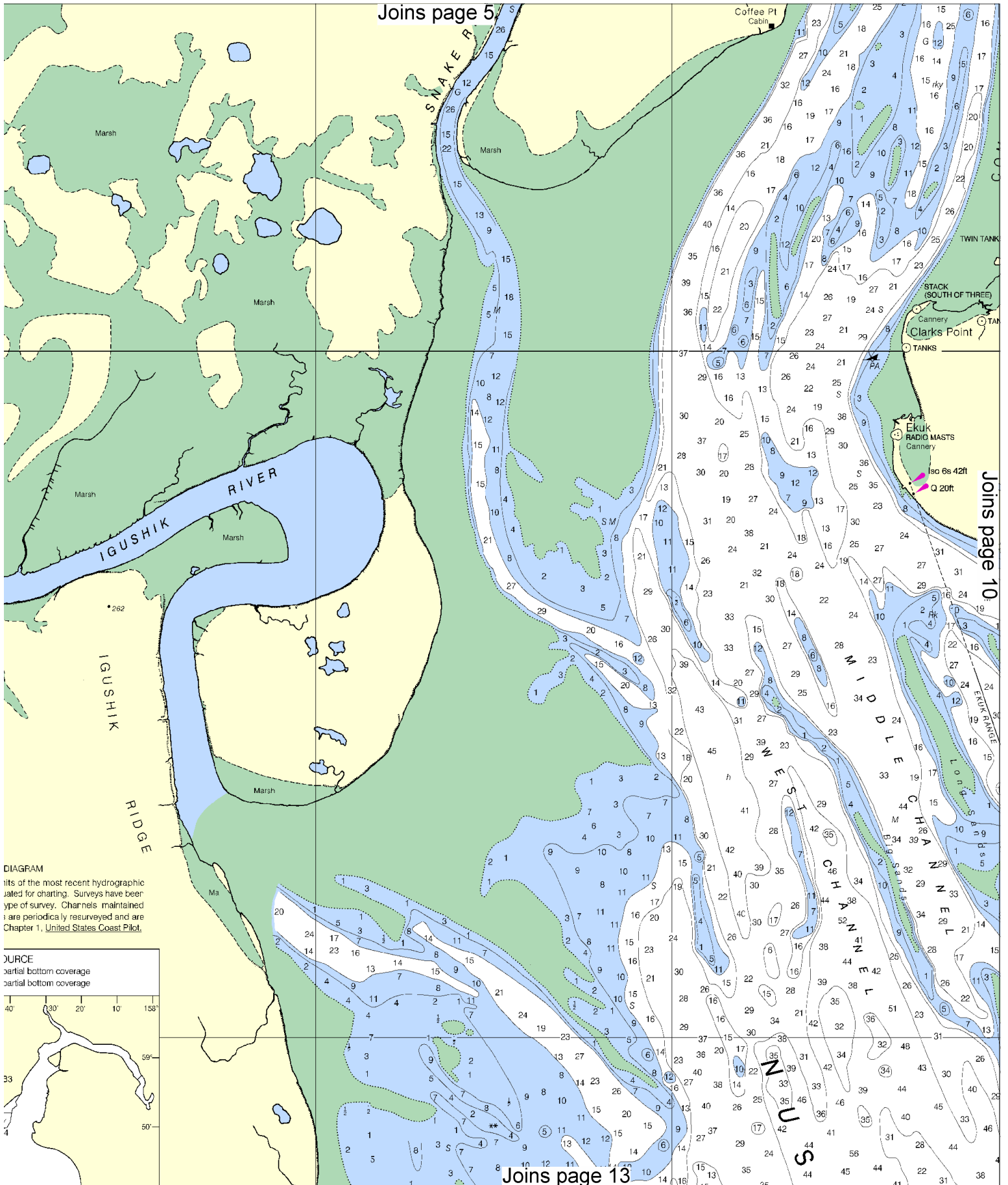
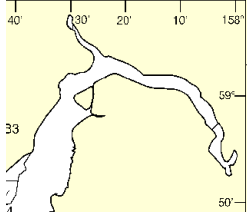
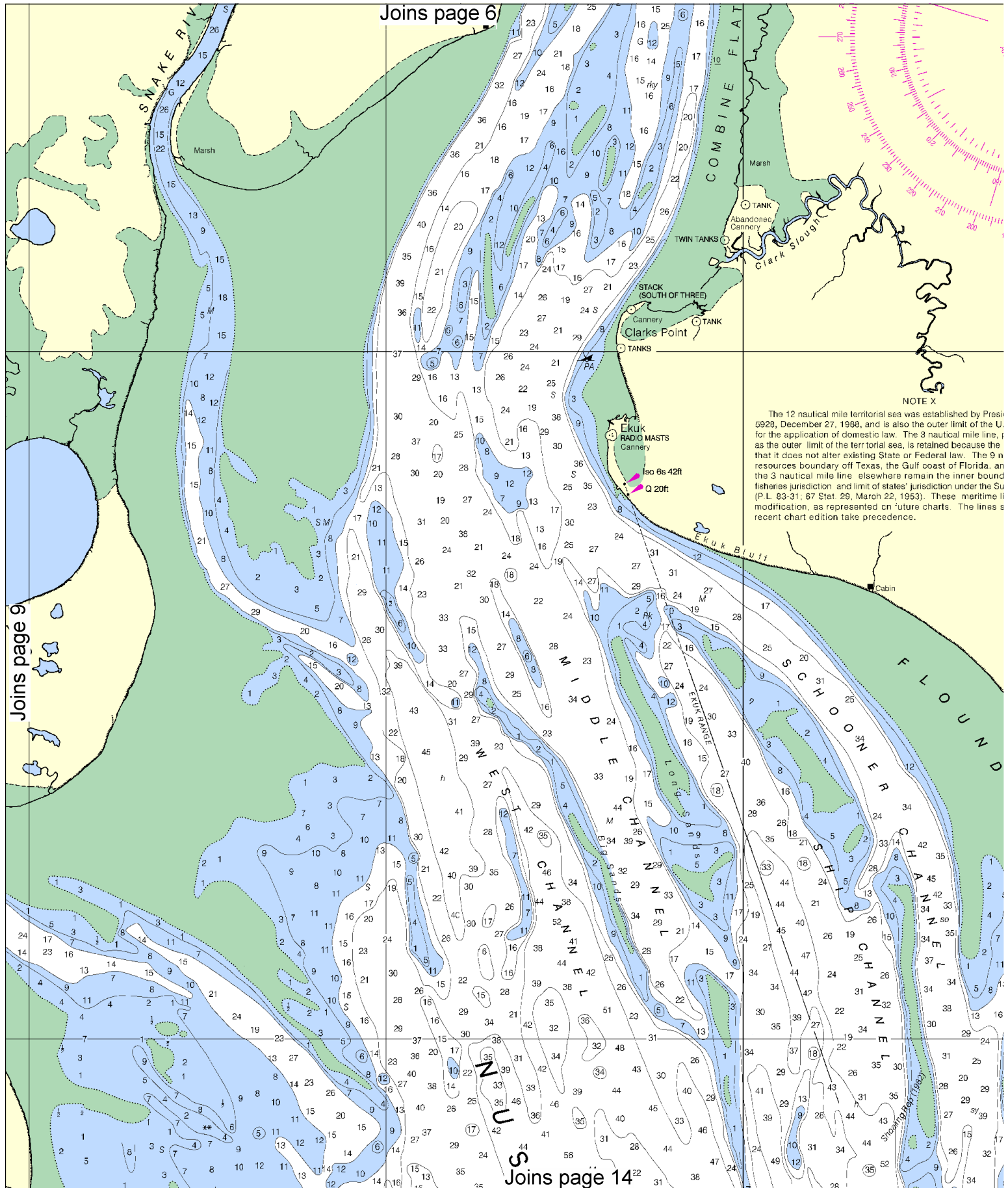


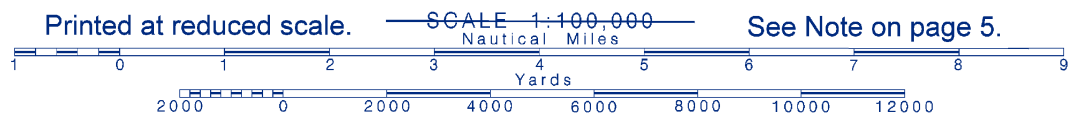
DIAGRAM
bits of the most recent hydrographic
dated for charting. Surveys have been
type of survey. Channels, maintained
are periodically resurveyed and are
Chapter 1, United States Coast Pilot.

SOURCE
partial bottom coverage
partial bottom coverage





10



Joins page 7

Navigation Regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.
Refer to charted regulation section numbers.



PROVISIONAL CHART

UNITED STATES

ALASKA - WEST COAST

BRISTOL BAY

NUSHAGAK BAY AND APPROACHES

Mercator Projection
Scale 1:100,000 at Lat 58° 36'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see Chart No. 1

Additional information can be obtained at nauticalcharts.noaa.gov

TIDAL INFORMATION

| Name | Place (LAT/LONG) | Height referred to datum of soundings (MLLW) | | | |
|------------------|---------------------|--|--------------------|-------------------|----------------------|
| | | Mean Higher High Water | Mean High Water | Mean Low Water | Extreme Low Water |
| Protection Point | (58°30'N/158°42'W) | 16.9 | 15.2 | 2.5 | -5.0 |
| Snag Point | (59°02'N/158°27'W) | 19.6 | 18.0 | 2.1 | -5.0 |
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Note: Currents in Nushagak Bay current velocities exceed 4 knots at times.
See Tidal Current Tables, Pacific Coast of North America and Asia, for predictions.
(Dec 2003)

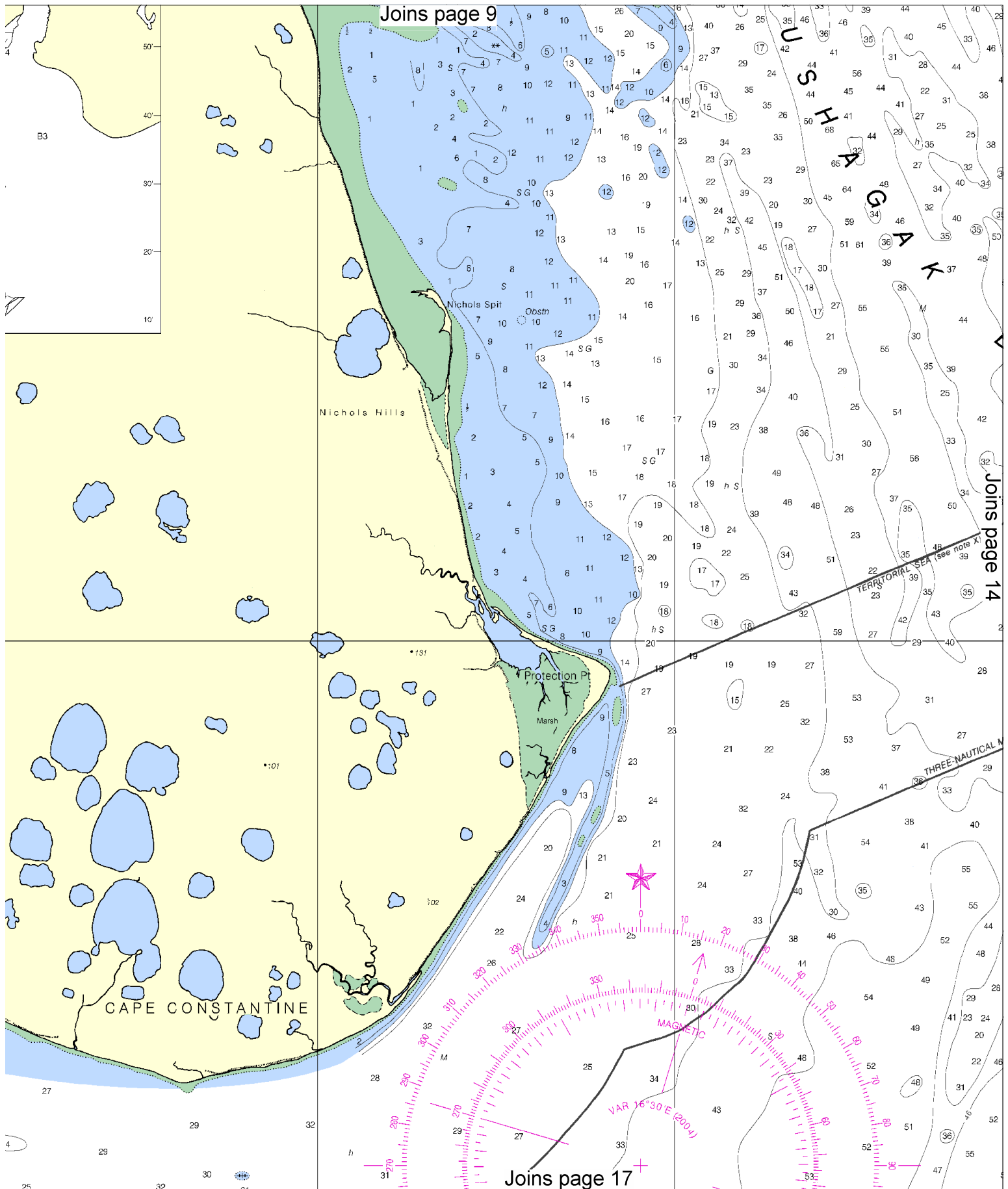
HORIZONTAL DATUM

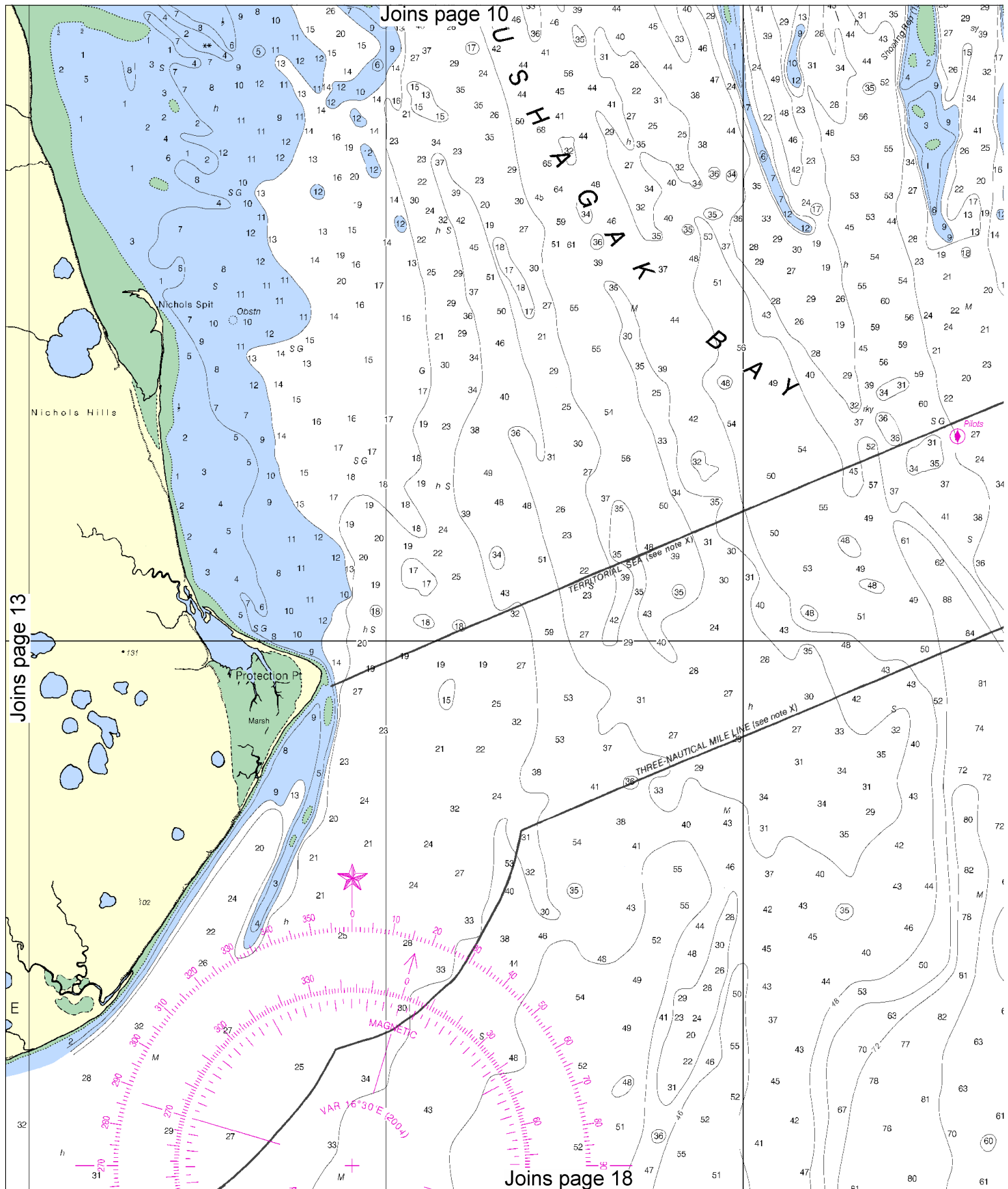
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 2.717" southward and 7.846" westward to agree with this chart.

Etolin Point (village) 149

COLREGS. 80 1705 (see note A)
International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

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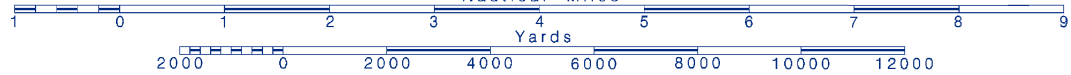
14



Printed at reduced scale.

SCALE 1:100,000

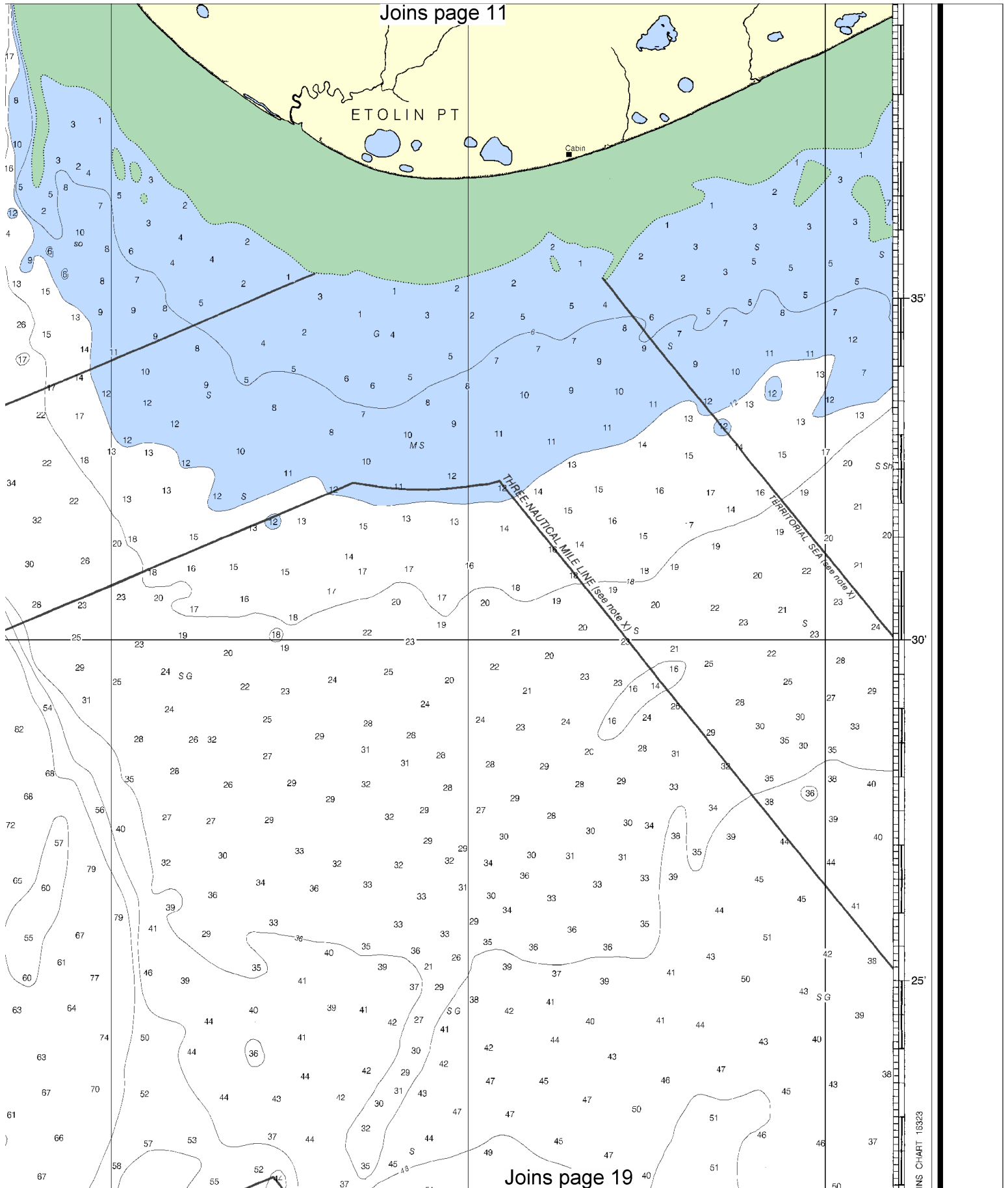
See Note on page 5.



Joins page 11

ETOLIN PT

Cabin



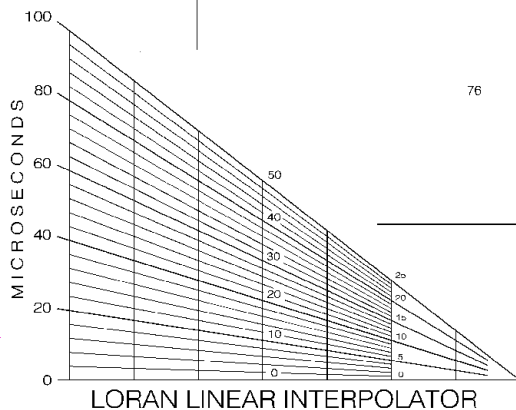
Joins page 19

INS CHART 16323

Joins page 12

DANGER AREA
334.1280 (see note A)

TERRITORIAL SEA AND CONTIGUOUS ZONE (see note X)



8th Ed., Mar. / 04 ■ Corrected through NM Mar. 06/04
Corrected through LNM Feb. 17/04

16322

LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

UPDATING SERVICE

FOR THIS CHART, a listing of NOTICE TO MARINERS (NM) subsequent to the NM corrected through date shown in the lc corner, is available from the Chief, Marine Chart Division (N/C Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

16



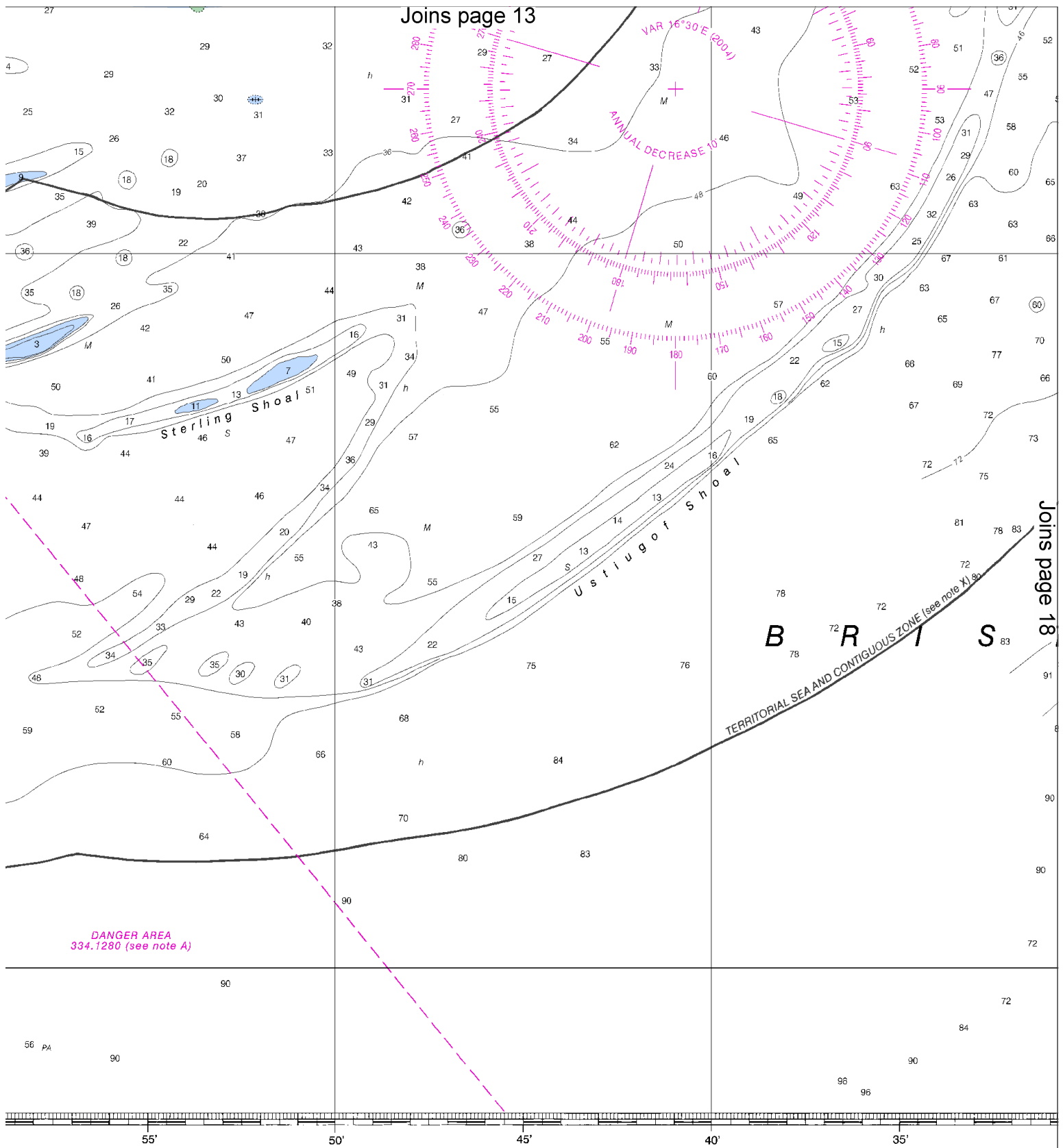
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SCALE 1:100,000
Nautical Miles

See Note on page 5.



Joins page 13

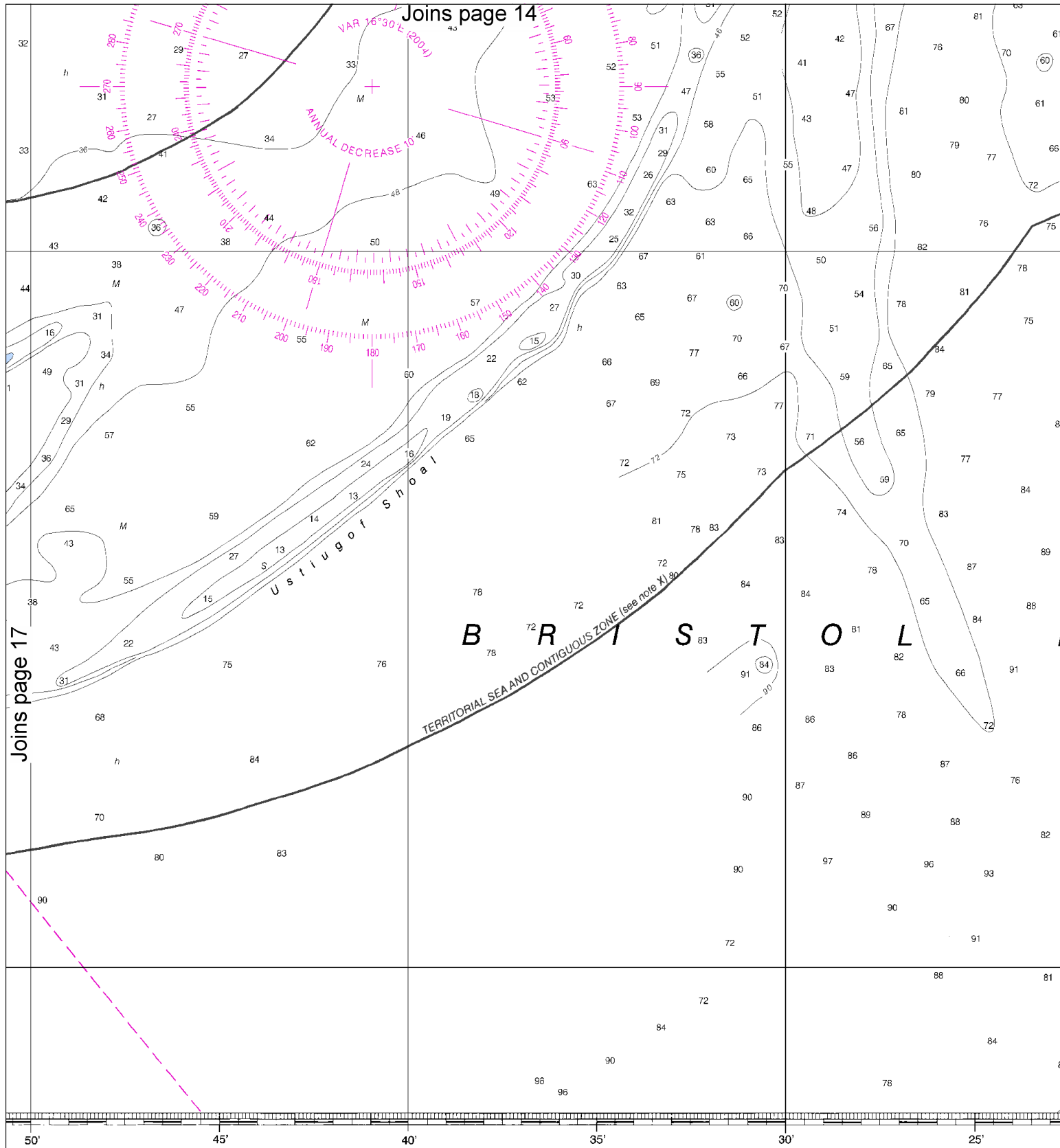


Joins page 18

SOUNDINGS IN FEET

NM) corrections
lower left hand
I/CS2), National

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



INGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

| FATHOMS | 1 | 2 | 3 | 4 | 5 | 6 |
|---------|---|----|----|----|----|----|
| FEET | 6 | 12 | 18 | 24 | 30 | 36 |
| METERS | 1 | 2 | 3 | 4 | 5 | 6 |

18

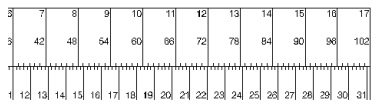
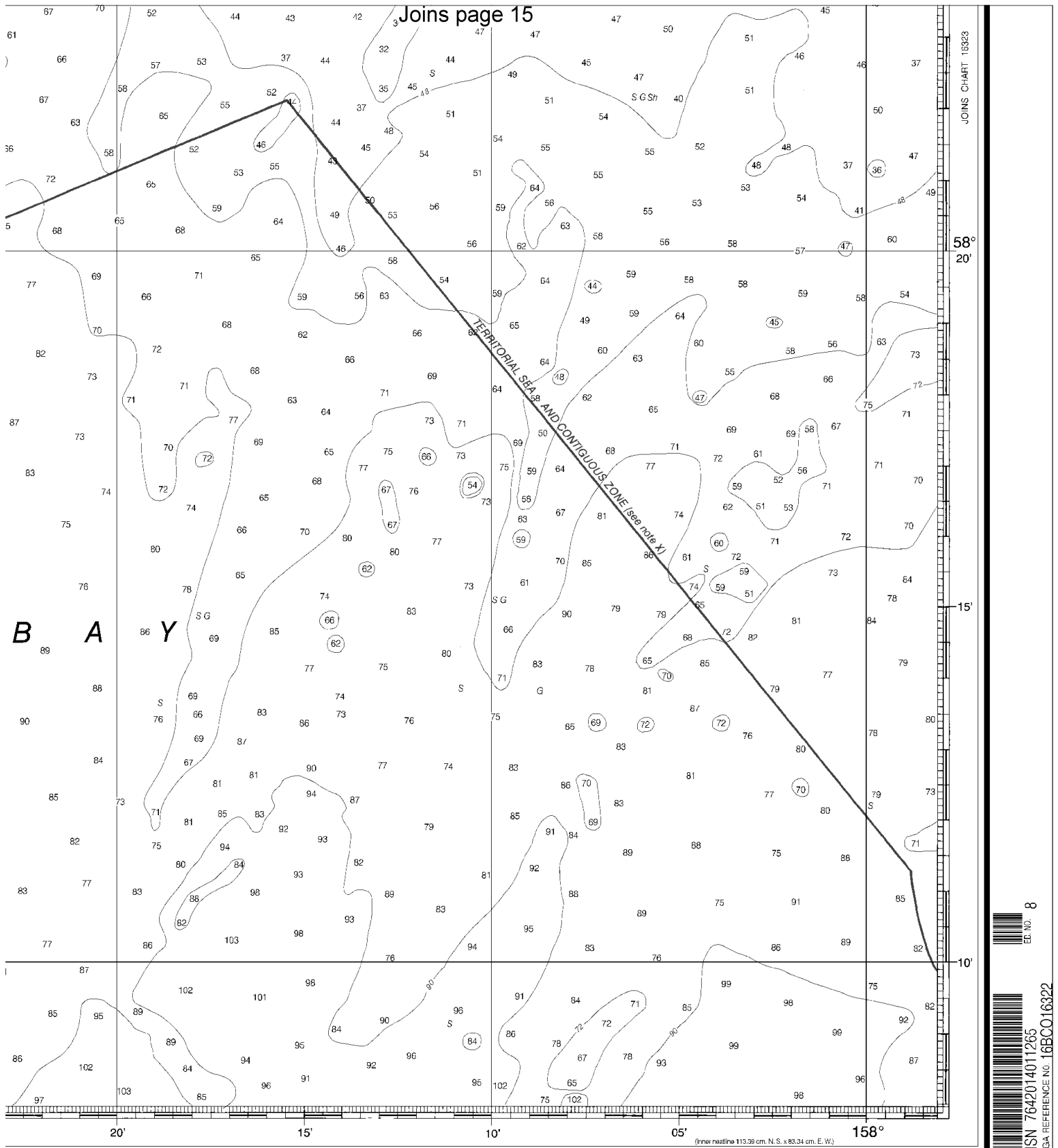


Printed at reduced scale.

SCALE 1:100,000

See Note on page 5.





Nushagak Bay and Approaches
SOUNDINGS IN FEET - SCALE 1:100,000

16322
LORAN-C OVERPRINTED

ED. NO. 8
NSN 7642014011265
NGA REFERENCE NO. 16BC016322

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.

Coast Guard Search & Rescue (Pacific Coord) – 510-437-3700

Coast Guard Search & Rescue (RCC Juneau) – 907-463-2000

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts – These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Electronic Navigational Charts (NOAA ENC[®]) – ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (NOAA RNC[™]) – RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official BookletCharts[™] – BookletCharts[™] are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketCharts[™] – PocketCharts[™] are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot[®] – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at www.NauticalCharts.NOAA.gov.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to <http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm>.

Internet Sites: www.NauticalCharts.NOAA.gov, www.NOAA.gov, www.TidesandCurrents.NOAA.gov, www.NOS.NOAA.gov.